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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,478	07/17/2003	James Gary Pruett	HTLP.8213	2526

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EXAMINER	
COLE, ELIZABETH M	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
03/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/621,478	PRUETT ET AL.	
	Examiner	Art Unit	
	Elizabeth M. Cole	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/6/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/07 has been entered.

2. Claims 42-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification describes the surface area of the substrate fabrics in terms of grams per square meter. However, the units provided are not units for surface area, but for weight per unit area. Therefore, the specification does not enable one to make the claimed composite material having a high surface area. It does not enable one of skill in the art as to what the surface area value should be.

3. Claims 42-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The units set forth for the surface area of the fibrous substrate do not describe the material in terms of surface but in terms of weight per unit area. Therefore, it is not clear what is being claimed, the basis weight of the fibrous material or the surface area of the fibrous material.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 42-44, 46-49, 51, 53-56 are rejected under 35 U.S.C. 103(a) as obvious over Gabor et al, U.S. Patent No. 5,547,512 in view of Wilson et al, U.S. Patent No. 6,321,915. Gabor discloses a substrate which comprises inorganic fibers such as aluminum borosilicate, mullite, carbon fibers, alumina zirconia fibers (col. 8, lines 26-32), in the form of a fabric, (example 36 or a tow). The coating can be an inorganic coating such as carbides and carbon. See col. 8, lines 35-37. The material is wound onto a take-up roll after formation, and thus, would be able to be unrolled. See figures and col. 7, lines 32-39. Gabor does not disclose the particularly claimed variation in the mass of the pyrolytic coating. However, since Gabor does teach forming the coating and teaches that the uniformity of the coating can be controlled by performing the coating at low temperature and pressure, it is reasonable to presume that the material of Gabor would necessarily possess the claimed uniformity of coating or else it would have been obvious to have controlled the processing parameters as taught by Gabor at col. 4, lines 1-11, in order to arrive at a material having the desired uniformity. Gabor et al differs from the claimed invention because it does not disclose that the substrate has the claimed surface area. Wilson '915 teaches that in forming filter media which comprises carbon or ceramic fibers and inorganic fiber whiskers that employing fibers which have a high surface area improves the adsorption of the filter material. See col.

9, line 35- col. 10, line 39. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed high surface area fibers in the substrate of Gabor as taught by Wilson '915 in order to increase the adsorption of the filter material. The choice of particular values of surface area would have been within the level of the skilled artisan, in view of the teaching of Wilson '915 that fibers having high surface areas can be selected for use in filter materials and therefore to have employed fibers having the desired surface area in order to form substrates having the desired surface area.

6. Claims 45, 50, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gabor et al, U.S. Patent NO. 5,547,512 in view of Wilson, U.S. Patent NO. 6,321,915 as applied to claims 42-44, 46-49, 51 above, and further in view of Wilson et al, U.S. Patent No. 6,264,045. Gabor discloses a coated fabric as set forth above. Gabor differs from the claimed invention because while Gabor teaches employing inorganic fibers, it does not specifically teach that the fabrics also comprise inorganic whiskers. Wilson '045 discloses a structure comprising a substrate which comprises inorganic fiber and inorganic fiber whiskers. The inorganic fibers can comprise carbon fibers including those derived from PAN, pitch or rayon precursor, ceramic fibers such as silicon carbide, silicon nitride, aluinosilicates and others. The inorganic fiber whiskers can comprise alumina, carbon, silica, glass, silicon carbide, silicon nitride, titanium nitride and mixtures therefore. See col. 5, lines 28-42. A pyrolytic carbon coating can be formed on the structure. See col. 7, lines 18-22. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to have employed the particular types of fibers and whiskers disclosed in Wilson '045 in the substrate of Gabor, motivated by the teaching of Wilson that such fibers and whiskers were recognized in the art as suitable for use as a substrate on which carbon coatings are formed.

7. Applicant's arguments filed 12/17/07 have been fully considered but they are not persuasive. Applicant argues Gabor does not teach using a high surface area starting fabric or optimizing the ratio of substrate surface area to furnace wall surface area to control the deposition. With regard to the high surface area starting fabric, this argument is moot in view of the new grounds of rejection. With regard to optimizing the ratio of substrate surface area to furnace wall surface area to control the deposition, this limitation is not claimed and therefore the argument is not persuasive. Further, even if the limitation was claimed, the burden would still be on Applicant to show that any process differences resulted in an unobvious difference between the claimed invention and the prior art product. The fact that Gabor might use a different process than Applicant does not make the product claims patentable absent such a showing.

8. Applicant argues that Gabor does not disclosed the claimed variation in the mass of the pyrolytic coating. However, the claims do not require any variation, but instead recite a maximum variation. Since Gabor prefers a uniform coating, it is reasonable to presume that the coating of Gabor would satisfy the claimed maximum value.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c